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TITLE: HIGH-STRENGTH FIBER ROPE

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INVENTOR-INFORMATION:

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ABSTRACT:

PROBLEM TO BE SOLVED: To provide a high-strength fiber rope that is made of polybenzoxazole fiber that causes a low level of strength degradation when it is exposed to high temperature and high humidity conditions for a long period of time, even after the fiber is damaged and kink band is generated.

SOLUTION: An organic pigment that has high heat resistance with a thermal decomposition temperature of  $\geq 200^{\circ}\text{C}$  and dissolves in mineral acid, preferably bears -H- and/or NH- groups in its molecular structure, particularly perinone and/or perylene, phthalocyanine or quinacridone is included in the fiber thereby polyether sulfone fiber having a strength retention rate of  $\geq 80\%$  is obtained after the fiber is twisted at a twist factor of 30, and then treated under the conditions of a temperature of  $80^{\circ}\text{C}$  and a relative humidity of 80% for 240 hours.

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